ABSTRACT OF THE DISCLOSURE

In a method for the intraoperative generating of an updated volume dataset, a first volume dataset is reconstructed from a series of n 2D X-ray projections (of a patient that are acquired at different angles. During a medical intervention, m 2D X-ray projections (m<n) of the patient are acquired from different angles. In a first version of the method, m 2D X-ray projections of the series of n 2D X-ray projections are replaced by the intraoperatively acquired m 2D X-ray projections, and an updated volume dataset is reconstructed using the intraoperatively acquired m 2D X-ray projections and n-m 2D X-ray projections that were not replaced in the series of n 2D X-ray projections. In a second version of the method, a second volume dataset is reconstructed with the intraoperatively acquired m 2D X-ray projections and is fused with the first volume dataset to form an updated volume dataset.